

NOL-19-7753.



Dart Aerospace Ltd.
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Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

D3903-1

Job Sheet 177484



Part No: D3903-1

Job Qty: 2 ea

Part Name: Spacer



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 5/14/18

Job Tracking No:

Due Date: 5/25/18

Created By: Michelle Gagnon-Donovan

Type: Stock

Description:

Note: DWG REV B IPP RevA: New issue DD verified by:EC

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	2 Ea	5/25/18	5/25/18	0.00	0.00	Start Up Machining-2		
100	Hardinge	2 pcs	5/25/18	5/25/18	0.00	0.05	Hardinge		
110	QC	2 pcs	5/25/18	5/25/18	0.00	0.00	QC2 Machining-2		
120	QC	2 pcs	5/25/18	5/25/18	0.00	0.00	QC8 Machining-2		
125	Skidtubes	2 pcs	5/25/18	5/25/18	0.00	0.01	Skidtubes-2		
130	Packaging	2 pcs	5/25/18	5/25/18	0.00	0.00	Packaging3-2		
140	QC21-SA	2 Ea	5/25/18	5/25/18	0.00	0.00	QC21		

Part Op 100 - 1-TURN AS PER FOLIO FA813 & DWG D3903,
Descriptions: 125 - Clean spacers with Ultra Aluminum Cleaner
130 - LOCATION : LG001

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
M6061T6T0.375W.058 5/8" Round Bar	6061-T6 Round Tube .375 X.058W	.6900 ft (.345 ea)	90-Start up Operation	

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	M6061T6T0.375W.058	1	145	0

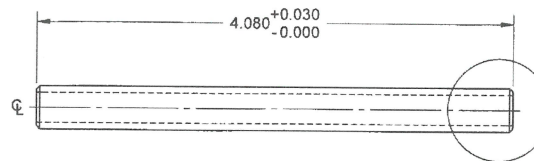
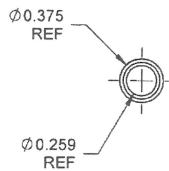
Part Specifications

Spec No	Description	Target/Tolerance	Limits	Type	Special Comments
1	Spacer	0.375Inches + 0.006 - 0.001	0.381 0.374	Diameter	
2	Spacer	0.259Inches + 0.006 - 0.001	0.265 0.258	Diameter	
3	Spacer	4.080Inches ± 0.030	4.110 4.050		
4	Spacer	0.030Inches ± 0.010	0.040 0.020		
5	Spacer	45.000Degrees ± 0.500	45.500 44.500	angle	

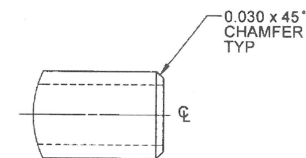
Plex 5/14/18 10:49 AM Dart.Gagnon.Michelle

SHOP COPY
 RETURN TO
 ENGINEERING
 UNCONTROLLED COPY
 SUBJECT TO AMENDMENT
 WITHOUT NOTICE
 WORK ORDER
 NO. 177484

MAY 14 2018



B2-1
 DETAIL A



DETAIL A C3-1
 SCALE 2X

D3903-1 SPACER

RELEASED
 8/6/15

- NOTES:**
- 1) MATERIAL: 6061-T6 OR 6061-T62 ALUMINUM SEAMLESS TUBING 0.375" OD x 0.058" WALL PER WW-T-700/6 OR AMS 4080 OR AMS 4082 OR QQ-A-200/8 OR QQ-A-225/8 OR ASTM B210 OR ASTM B241 (REF DART SPEC. M6061T0.313W.058)
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: NONE
 - 7) WEIGHT: 0.02 lbs

B	CORRECT TYPO Ø0.375 WAS Ø0.313 (ZN A6-1)	RF	09.06.30
A	NEW ISSUE	RF	09.03.30
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE USA, INC.	
DRAWN	RF	PORT HADLOCK, WA	
CHECKED	RF	DRAWING NO.	REV. B
MFG. APPR.	RF	D3903	SHEET 1 OF 1
APPROVED	RF	TITLE	SCALE
DE APPR.	RF	SPACER	NTS
DATE	09.06.30	COPYRIGHT © 2009 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

DQA:

ZK

Date:

Nov 19/19

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed:

Date:

Work Order update only ☐

Work Order: 177484

Part No. 03903-1

NCR No. 19-7753

DISPOSITION

 Rework ☒
 Scrap ☐
 Use-as-is ☐
 Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☒	Cross tube ☐	Water Jet ☐	Engineering ☐
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐
Large Fab ☐	Composite ☐	Supplier ☐	

Date:

18/5/14

Step #:

102

QTY Effective:

2

MRB (QSI042) Approval

DAS
12
9-89

16/5/14

Description Work Order Deviation

Disposition

Custom part to fit deviated skid tube
 D119-646-041 B174911.

Machine $\phi 0.438$ O.D. x $\phi 0.254$ I.D. x $4.080^{+0.030}_{-0.000}$ long
 using 6061-T6 Round Bar (ref. M6061T6R).

Do not stock. For use on D119-646-041 B174911
 only.

Completed By

 Lead hand / Supervisor
 Approval Verification

18-05-16

 QC / QA Coordinator
 Approval

19-05-11

Root Cause

Environment ☐	No Re-verification ☐
Design ☐	Operator ☐
Doc/Data ☐	Offset/Setup ☐
Equip/Tooling ☐	Supplier ☐
Handling/Pre ☐	Training ☐
Material ☐	Use for Testing ☐
Internal Transport ☐	Poor Information ☐
Tribal Knowledge ☐	Rushing ☐
LOA ☐	Product Improvement ☐
Substation ☐	Process Improvement ☐
Past Expiry Date ☐	Manufacturing Process ☒
Misidentified ☐	Past Due ☐

Pressure/Forced ☐
Bending ☐
Centre Not Concentric ☐
Cracks ☐
Crimp/Kink/Ripple/Wave ☐
Cuffs ☐
Crushing ☐
Heat Treat ☐
Wave/Twist in Tube ☐
Marks/Chatter ☐

FAULT CATEGORY

Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
BOM/Route ☐	Grain ☐	Over/Under tolerance ☐
Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐
Contamination ☐	Out of Sequence ☐	Part Moved ☐
Countersink ☐	Off-set ☐	Drawing ☐
Cut Too Short ☐	Mislabeled ☐	Finish ☐
Instructions Incomplete/Unclear ☐	☒ Fit/Function	Misread ☐
Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐

OTHER: